



U.S. Department
of Transportation

**Federal Transit
Administration**

COVID-19 Recovery Practices in Transit

Version 10

DISCLAIMER: To assist public transportation agencies, the Federal Transit Administration (FTA) has collected information on practices used by transit agencies worldwide. FTA has not assessed the efficacy of any of the practices listed. This list is provided for technical assistance only. Inclusion on this list does not imply endorsement by FTA of any of these practices, tools, or other information. Some transit agency websites may not be up to date. In addition, some transit agency websites may not reflect current Centers for Disease Control and Prevention (CDC) guidance or include specific information about their COVID-19 recovery efforts. News articles are used in this document only for informational purposes.

The contents of this document do not have the force and effect of law and are not meant to bind the public in any way. This document is intended only to provide clarity to the public regarding existing requirements under the law or agency policies. Grantees and subgrantees should refer to FTA's statutes and regulations for applicable requirements.



Overview

The Coronavirus Disease 2019 (COVID-19) public health emergency has had a significant impact on public transportation operations throughout the Nation. As communities recover from COVID-19, transit agencies are implementing new and enhanced measures to ensure the safety of their employees and passengers, and increase public confidence in transit, including enhanced cleaning and disinfection, personal protective equipment (PPE) and face coverings, and social distancing.

The Federal Transit Administration (FTA) is committed to helping the U.S. public transportation industry recover. This resource provides web links to practices implemented by transit systems worldwide to recover from the COVID-19 public health emergency. This list is non-exhaustive and is provided for technical assistance only. Practices are organized under the following categories:

Protecting Workers.....	6	Infrastructure	31
Face Coverings, PPE, and Vaccinations	6	Operational Considerations	33
In-Vehicle Protections	7	Planning for Recovery	33
Infrastructure (Non-vehicle Protections).....	9	Service Changes to Support Opening, Restoration or Expansion of Transit Service	34
Worker Communications, Return to Work Policies, and Health Screening	11	Service Adjustments to Manage Crowding.....	37
Sick Leave Policies	13	Building for the Future.....	39
Recruiting and Training	14	Passenger Communications	40
Protecting Passengers.....	16	Technology and Innovation	53
Face Coverings and PPE	16	Detecting Crowding	53
In-Vehicle Protections	19	Passenger Monitoring.....	55
Infrastructure (Non-vehicle) Protections.....	24	Passenger Engagement.....	56
Cleaning, Disinfecting, and Ventilating Vehicles and Infrastructure	25	Cleaning, Sanitizing, and PPE	56
Vehicles	25	Payment Options	57
		Micromobility.....	59



Broken Links

Links identified in this tool may become inoperative as transit agencies or news organizations update their websites with new information. In the event you find a broken link, please send an email to FTASystemSafety@dot.gov.

To Recommend a Practice

If you are a transit agency or State with a recommended practice you would like added to this tool, please send an email to FTASystemSafety@dot.gov. Be sure to include a brief description of the practice and an active weblink to information on the practice. To the extent feasible, new practices will be included in the next update.



Acronyms and Abbreviations

Abbreviation	Full Term
AC Transit	Alameda-Contra Costa Transit District
AI	Artificial Intelligence
BART	Bay Area Rapid Transit
BARTA	Berks Area Regional Transportation Authority
BYD	Build Your Dreams, North America
CATA	Capital Area Transportation Authority
CARTA	Charleston Area Regional Transportation Authority
COTA	Central Ohio Transit Authority
COVID-19	Coronavirus Disease 2019
CTA	Chicago Transit Authority
DART	Dallas Area Rapid Transit

Abbreviation	Full Term
FTA	Federal Transit Administration
GCRTA	Greater Cleveland Regional Transit Authority
Houston Metro	Metropolitan Transit Authority of Harris County
King County	King County Metro Transit District
LACMTA	Los Angeles County Metropolitan Transportation Authority
LIRR	Long Island Rail Road
MARTA	Metropolitan Atlanta Rapid Transit Authority
MBTA	Massachusetts Bay Transit Authority
Metro Transit	Metropolitan Transit, Service of Metropolitan Council
Miami-Dade	Miami-Dade Transit, County of Miami-Dade



Abbreviation	Full Term
MTA	Metropolitan Transportation Authority
MUNI	San Francisco Municipal Transportation Agency
NACTO	National Association of City Transportation Officials
NJT	New Jersey Transit
NYCT	New York City Transit
NYPTA	New York Public Transit Association
PPE	Personal Protective Equipment
RTD	Regional Transportation District
RideKC	Kansas City Regional Transit
SEPTA	Southeastern Pennsylvania Transportation Authority
TriMet	Tri-County Metropolitan Transportation District of Oregon

Abbreviation	Full Term
UTA	Utah Transit Authority
Valley Metro	Valley Metro Regional Transportation Authority
VIA	Via Metropolitan Transit
VRT	Valley Regional Transit
VTA	Santa Clara Valley Transportation Authority
WMATA	Washington Metropolitan Area Transit Authority

Protecting Workers

Face Coverings, PPE, and Vaccinations

Topic	Description	Examples
1. Face coverings	Recommend or require face coverings for employees and passengers	DART: Face coverings required for employees and passengers MBTA: Face coverings required for employees and passengers NYCT: Face coverings required for employees and passengers WMATA: Face coverings required for employees and passengers
	Provide face coverings to employees	Jacksonville Transportation Authority: 3D-printed face shields for front-line employees MARTA: Provides face masks to employees NJT: Provides face masks to employees*
	Provide N95 and surgical masks for employees based on results of safety assessment	NYCT: Distributed N95 and surgical masks to employees and published video on how to use masks appropriately

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Topic	Description	Examples
2. Hand sanitizer, gloves, or other hand-hygiene items	Provide hand hygiene items for employees	CTA: Gloves and hand sanitizer provided to employees Greater Attleboro Taunton Regional Transit Authority: Hand sanitizer units installed in all vehicles NJT: Gloves provided to employees* San Diego Trolley: Hand sanitizer and gloves available for employees
3. Vaccination Incentives	Provide incentives to encourage worker vaccination	Chatham Area Transit: Partnering with local city, county, public schools to offer transit workers \$500 for receiving the COVID-19 vaccination

In-Vehicle Protections

Topic	Description	Examples
1. Compartment shields	Install shields around operator compartments, such as rigid plexiglass or polycarbonate	DART: Operator shields installed on all buses Delaware Transit Corporation: Installed barrier shields and evaluates efficacy*

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Topic	Description	Examples
	structures or flexible vinyl “curtains”	GCRTA: Operator curtains installed on all buses and paratransit vehicles Gold Coast Transit: Installed plexiglass shields around bus operator compartments MARTA: Outfitted bus fleet with polycarbonate shields Metropolitan Transit System: Installed barriers for operators Palmetto Breeze Transit: Installed plexiglass operator shields Pelivan Transit: Installed protective barriers in vehicles Tri-Valley Transit: Installed plastic barriers between operators and passengers Valley Transit: Installed protective barriers in vehicles NYCT: Installing vinyl shields on buses
2. Safe area behind bus operator	Create a driver safe area by removing or taping off rows of passenger seating behind the	Denver RTD: COVID-19 plan creates driver safe area NJT: Removing rider seats near bus operators

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Topic	Description	Examples
	driver's operating console or compartment	Valley Metro: Seats near the operator are blocked off
3. Safe area behind rail transit operator	Create safe area for rail operators by closing railcar closest to operator compartment	WMATA: Closes first and last rail cars on trains to protect workers
4. Visual cues for physical distancing	Install visual cues, such as stickers or tape, to remind passengers to distance themselves from the driver	The Bus of the City and County of Honolulu: Installed tape six feet behind the bus operator
5. Vehicle boarding	Change boarding procedure to reduce contact between operators and riders	NJT: Rear-door boarding for all routes where rear-boarding is available

Infrastructure (Non-vehicle Protections)

Topic	Description	Examples
1. Shields or other physical barriers	Install shields or other physical barriers around work locations to	Metropolitan Transit System: Installed barriers at all check-in locations

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Topic	Description	Examples
	minimize contact among workers and/or the public	NYCT: Installing plexiglass barriers in subway work locations, bus depots, and central maintenance facilities
2. Visual cues	Install visual cues, such as stickers or tape, to remind workers and/or the public to maintain physical separation	Miami-Dade: Installed floor decals on platforms to encourage physical distancing Transport for London: Instituted one-way pedestrian flow measures in depots and control centers to support physical distancing*
3. Scheduling	Set schedules that reduce the number of workers in a space at one time	MBTA: Divided operating teams in two and rotating staff between its main and backup Rail Operations Control Center to allow each facility to be cleaned and disinfected when not in use* NYCT: Construction crew work is staggered to reduce the number of workers in a specific location at one time*
4. Access to shared spaces	Reduce or eliminate in-person meetings	DART: No longer holding in-person meetings
5. Teleworking	Permit or require workers to work from home as appropriate	Heart of Iowa Regional Transit Agency: All office employees, including dispatch, work remotely Metro Bus: All administrative staff work remotely Metrolinx: Non-frontline staff work from home policy

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Topic	Description	Examples
		NYCT: Construction crews using an internal phone application to track progress and using a GoPro camera to monitor progress and inspect work remotely* and Non-essential personnel work from home

Worker Communications, Return to Work Policies, and Health Screening

Topic	Description	Examples
1. Worker guide	Provide guidance on staying safe for workers that are returning to work	Metrolinx: Safety officers conducting onsite training and support, inspections to ensure staff understand and comply with COVID-19 safety policies Santa Clara VTA: Return to Work Playbook to help employees stay healthy at work
2. Health screening	Check temperatures of workers as they report to work	Central Area Rural Transit Service: Operator temperatures checked at the start of each shift Fayetteville Area System of Transit: Daily wellness checks at the start of shifts MBTA: Worker temperatures checked before every shift*

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Topic	Description	Examples
		Metropolitan Transit System: Participating in Scripps Health Detect Study NYCT: Temperature Brigade testing workers at strategic locations Oahu Transit Services: Testing employee temperatures daily and occasional COVID-19 tests* RTC Southern Nevada: Thermal analysis units installed in employee facilities VIA: Daily employee temperature testing
3. COVID-19 testing	Provide free COVID-19 testing for workers	NJT: Testing program for employees NYCT: COVID-19 antibody testing for employees Oahu Transit Services: Testing employee temperatures daily and occasional COVID-19 tests* Rhode Island Public Transit Authority: Free COVID-19 testing for transit drivers, even if they are asymptomatic SEPTA: Testing program for employees

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Topic	Description	Examples
		Santa Clara Valley Transportation Authority: Offering COVID-19 testing for employees
4. COVID-19-related healthcare	Provide access to healthcare	CTA: Expanded access to health care services for employees without CTA healthcare coverage for COVID-19-related illnesses and expanded access to telehealth services
5. Vulnerable workers	Provide protections for vulnerable workers	SunLine Transit: Vulnerable workers may use sick or other available time off and unpaid time off will be approved

Sick Leave Policies

Topic	Description	Examples
1. Sick leave	Establish policies that promote employee sick leave	SunLine Transit: Workers do not need to provide a doctor's note before or during an illness
2. Quarantine protocols	Establish protocols for responding to COVID-19 cases among employees	CTA: Workers testing positive and any other workers who came into close contact with the patient directed to remain at home with pay for 14 days since their last contact

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Recruiting and Training

Topic	Description	Examples
1. Recruitment	Work with community colleges, non-profit agencies, and technical education to develop and recruit employees	Denver RTD: Partnering with local community colleges and non-profits to recruit and train transit employees LACMTA: Partnering with community colleges to establish a transit workforce development program MARTA: Collaboration with the Latin American Association to find bilingual workers* NJT: Partnership with Edge4Vets to help veterans secure positions at the transit agency*
2. Testing and training	Establish a process for conducting pre-employment testing virtually	WMATA: Register and conduct testing for job applicants virtually
	Provide online resources to support employees preparing for transit careers	UTA: Offer pre-test study guides and resources online to support employees in preparing for tests
	Provide online training	DART: Creating virtual training opportunities RideKC: Employee training provided using an e-learning platform

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Topic	Description	Examples
3. COVID-19 safety training	Develop online training to support employee awareness	New Mexico DOT: Developing and streaming COVID-19 safety training
		Shenzhen Bus: Providing online COVID-19 training courses
	Provide training to employees as they return to work	Transit Authority of River City: Operators will undergo training on safety protocols, CDC guidelines, and measures to protect themselves and their passengers

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Protecting Passengers

Face Coverings and PPE

Topic	Description	Examples
1. Face coverings	Recommend or require face coverings for passengers	Green Mountain Transit: All passengers above the age of two must wear a face covering NYCT: Face coverings required Shoshone-Bannock Tribes Public Transit: Face coverings required
	Distribute face coverings to passengers	CARTA: Distributing masks to passengers without them CTA: Piloting mask dispensers on buses King County: Installing mask dispensers MARTA: Installed onboard mask dispensers NJT: Mask Force deployed throughout the system to provide masks and personal protection items to customers NYCT: Installation of mask dispensers on buses

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Topic	Description	Examples
		TriMet: Mask dispensers on vehicles UTA: Providing free face masks to returning college students*
	Sell face coverings to passengers	CTA: PPE vending machines installed in select stations NJT: PPE vending machines installed in select stations and terminals NYCT: Deploying vending machines with face masks, gloves, hand sanitizer, and sanitizing wipes at 10 subway stations
2. Hand sanitizer, gloves, or other hand protection	Provide hand hygiene items	AC Transit: Installed hand sanitizer dispensers on fleet Athens Transit: Installed hand sanitizer dispensers on fleet BART: Giving out and selling personal hand straps to riders Kigali Bus: Passengers required to wash hands before boarding* Mason Transit: Hand sanitizer stations located by the front and rear doors of all buses Monterey-Salinas Transit: Installed hand sanitizer dispensers on fleet

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Topic	Description	Examples
		Nashua Public Transit: Hand sanitizer available on all vehicles for passenger use San Diego Metropolitan Transit System: Handwashing stations available at all trolley stops Société de Transport de Montréal: Installing touch-free hand sanitizers at station entrances * The Comet: Hand sanitizer available on all vehicles for passenger use Tri-Valley Transit: Hand sanitizer available on vehicles
3. COVID-19 testing for passengers	Offer COVID-19 testing to passengers	The COMET: Partnership with the Department of Health and Environmental Control to offer testing at the transit hub MARTA: Partnership with COVID Care Georgia, LabCorp, and the city of Brookhaven to make COVID-19 testing available via transit

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In-Vehicle Protections

Topic	Description	Examples
1. Vehicle occupancy	Establish policies or procedures to limit the number of passengers on any one transit vehicle	<p>City of Harrisonburg Public Transportation: No more than 18 passengers on each vehicle</p> <p>CTA: Bus operators authorized to bypass certain bus stops or only permit passengers to exit the vehicle depending on the number of passengers onboard and the size of the vehicle</p> <p>Govia Thameslink Railway: Using train weight to determine whether a train has sufficient space to let on additional passengers*</p> <p>King County: Creates passenger limits to support social distancing</p> <p>MARTA: Bus capacity limited to seated loads only and buses on standby to respond to increased demand</p> <p>Pelivan Transit: One passenger or party per paratransit vehicle</p> <p>Shenzhen Bus: Buses carry no more than 50-percent of capacity</p> <p>The Rapid: Limit of 15 passengers on 40' buses and four passengers on paratransit vehicles</p> <p>VIA: Link vans limited to two passengers</p>

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Topic	Description	Examples
	Increase vehicles in service to decrease the number of passengers per vehicle	BART: Running long trains throughout hours of service King County: Adding additional buses to high-demand routes MBTA: Increasing frequency on bus routes with high ridership MUNI: Adding more frequent service to lines that service neighborhoods that rely on transit service the most
2. Passenger boarding	Reduce contact among riders	Alaska Railroad: Boarding times staggered to reduce the number of passengers boarding at one time
	Rear door boarding and exiting	Lawrence Transit: Rear door boarding for all passengers not needing mobility assistance
	Mobility devices boarding and securement	GoRaleigh: Fully automatic securement system allows mobility passengers to secure themselves without direct physical assistance TransLink: Some buses will not pick up passengers using mobility devices, but will call taxis to provide service *
	Test passenger temperatures prior to boarding	Beijing: Rider temperatures screened prior to boarding * Intracity Transit: Passenger temperatures tested prior to boarding

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Topic	Description	Examples
		Pine Bluff Transit: Passenger temperatures checked prior to boarding Rapid Kuala Lumpur: Rider temperatures screened prior to boarding* Shenzhen Bus: Temperatures checked at all stations Singapore Land Transit Authority: Thermal cameras screen passengers in select stations*
	Reduce touch points	TriMet: Installed sensor-operated rear doors on vehicles
3. Quiet transit service	Ask passengers to refrain from talking on vehicles	East Japan Railway: Asking passengers to refrain from talking while onboard
4. Payment options	Encourage alternate methods of payment or suspend fares	CATA: Suspending fares CTA: Passengers must use farecard readers when boarding from the rear doors and buses not equipped with rear door farecard readers do not collect fares Metrolinx: Passengers may tap on and off of the system with their credit card or smartphone or smartwatch for a contactless way to pay without needing to load funds on a transit card or purchase a ticket ahead of time

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Topic	Description	Examples
		NJT: Modernized ticket vending machines offer contactless payment, mobile wallet compatibility Sound Transit: Suspending fares TriMet: Encouraging passengers to use contactless payment options and providing contactless cards via mail VIA: Providing Workforce Assistance Passes to provide free rides for unemployed passengers
5. Visual cues for physical distancing	Install visual cues, such as stickers or tape, to remind passengers to distance themselves from the driver and other passengers	City of Harrisonburg Public Transportation: Passengers corded off from operator and seats marked to space passengers appropriately Mason Transit: Bus rows and seats blocked off to ensure appropriate distancing New Orleans Regional Transit Authority: Seats blocked off to space passengers appropriately Pine Bluff Transit: Seats blocked off to space out passengers Tri-Valley Transit: Posted signs blocking off aisle seats

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Topic	Description	Examples
6. Vehicle configuration	Change the physical layout of the vehicle to promote physical distancing	BART: Piloting new configurations for some trains to create additional space between riders Tri-Valley Transit: Installed plastic barriers between rows of seats
7. Vehicle materials	Change materials within the vehicle to improve cleaning	CapMetro: Retrofitted vehicles with vinyl seats Maryland Transit Authority: Retrofitting buses with plastic seats* Metro Transit Authority of Harris County: Installing fiberglass seat inserts on light rail vehicles
	Install antimicrobial materials	Edmonton Transit Service: Installing anti-microbial push-plates on swing doors in transit centers and stations TransLink BC: Piloting copper-plated surfaces on buses and trains

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Infrastructure (Non-vehicle) Protections

Topic	Description	Examples
1. Visual cues for physical distancing	Install visual cues, such as stickers or tape, to remind riders to distance themselves from each other	Sacramento Regional Transit: Spray painted sidewalks to remind passengers to remain six feet apart TransLink BC: Installed stickers at stations to show passengers where to stand to remain six feet apart Turlock Transit: Floor decals in transit center to appropriately space visitors
2. Reduce exposure	Implement policies to reduce exposure in transit infrastructure	Denver Regional Transportation District: Bus concourse prohibits eating and limits the number of people in restroom facilities at one time Regional Transportation Commission of Southern Nevada: Maximum of 10 passengers permitted in transit centers for a maximum of 10 minutes each
3. Sanitation technology	Provide access to sanitization technology	Metrolinx: Installed UV sanitizers in select stations for customer use to sanitize electronic items and other small, non-porous surfaces

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Cleaning, Disinfecting, and Ventilating Vehicles and Infrastructure

Vehicles

Topic	Description	Examples
1. In-service cleaning	Clean vehicles in service	<p>Alaska Railroad: Custodial porter sanitizes surfaces, door handles, and restrooms every 30 minutes</p> <p>CATS: Buses and light rail vehicles cleaned during layovers</p> <p>CTA: Workers disinfect rail car high-touch surfaces at all terminals and workers disinfect bus high-touch surfaces at four bus terminals serving 30 routes</p> <p>DART: Light rail vehicles cleaned at least every 90 minutes at terminal stations</p> <p>Lawrence Transit: Buses receive midday cleaning while on route and buses with high ridership are switched out during the day for deeper cleaning</p> <p>Metropolitan Transit System: Trolley doors and buttons cleaned at four stations*</p> <p>Milwaukee County Transit Systems: Bus operators given disinfectants to use throughout service*</p>

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Topic	Description	Examples
		NYCT: Testing new air filters on several car classes to determine whether they effectively kill microbes The Rapid: Periodic disinfection of fixed-route and bus rapid transit buses throughout the day
2. Cleaning technologies	Use coatings or other mechanisms to decrease the likelihood of fomite transmission	CTA: Testing products on vehicle interiors to prevent pathogens from “sticking” to treated surfaces NJT: Contracted with Rutgers to study the effectiveness of UVC wavelength in killing viruses and mapping the interior of different bus models to identify the best placement for the UVC source* NYCT: Piloting antimicrobial biostats, materials that create a protective layer on surfaces and prevent microbes from growing, on surfaces in train cars and buses, stations, and crew quarters St. Louis Metro Transit: Using sanitizing products that inhibit growth of microbes for up to 30 days Valley Metro: Trains fogged with a “barrier” solution
	Use UV lights to disinfect vehicles	DART: UV system sanitizes air as it recirculates through buses

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Topic	Description	Examples
		<p>NYCT: Using UV lights in break rooms and operations centers, and working with university and startup to develop portable lights</p> <p>Vermont Agency of Transportation: Received funding from the Public Transportation COVID-19 Research Grant program to test the efficacy of two UV-C light products*</p> <p>Yanggao: Using UV light chambers to disinfect buses in five to seven minutes*</p>
	Use foggers, misters, or sprayers to disinfect vehicles	<p>ABQ RIDE: Using electrostatic foggers on fleet</p> <p>DART: Light rail vehicles sanitized with foggers</p> <p>Hong Kong Mass Transit Railway: Deployed vaporized hydrogen peroxide robot to clean and decontaminate trains and stations*</p> <p>MARTA: Delta Airlines provided MARTA with 50 electrostatic sprayers to help clean MARTA buses, trains, and rail stations</p> <p>NYCT: Testing electrostatic sprayers that positively charge a disinfecting solution, atomizes it, and disperses it, in subways and buses</p>

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Topic	Description	Examples
		Valley Metro: Fogging buses three times per week and trains once per month
3. Daily cleaning	Clean vehicles prior to or after service	Long Beach Transit: Each bus is cleaned with freshly laundered towels and towels are not used on multiple buses before laundering RideKC: Buses sanitized nightly Sunline Transit Agency: Buses fogged with disinfectant with the HVAC running VRT: Every in-service bus cleaned and disinfected each night
4. Ventilation	Use special air filters and purifiers	BART: Installing MERV14 filters in vehicle HVAC systems and continuing testing ultraviolet bulbs in HVAC system Capital Metro: Installing air purification devices on bus fleet Cross Sound Ferry: Installed air purification systems DART: Ultraviolet germicidal irradiation in bus air-conditioning ducts that clean the air automatically as it recirculates

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Topic	Description	Examples
		<p>Go Transit and Valley Transit: Installed air and surface purification system</p> <p>Green Bay Metro: Used CARES Act funding to fund air purification technology installation on bus fleet*</p> <p>King County: MERV8 HVAC filters used on Metro's buses</p> <p>Metrolink: Installed new filters on rail cars</p> <p>MTA: Understanding subway ventilation and testing ultraviolet technology in railcar ventilation systems*</p> <p>NJT: Partnering with Knorr Merak to test three-stage air filtration and purification</p> <p>Oahu Transit Services: Piloting air purification technology*</p> <p>Plymouth Metrolink: Installed air cleaning devices that filter more than 95-percent of airborne viruses*</p> <p>TriMet: Published information on airflow and ventilation on transit vehicles</p>

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Topic	Description	Examples
		Turlock Transit: Installed air filtration devices in driver compartments
	Open windows or use other means to draw outside air through vehicles	East Japan Railway: Automatic ventilation systems exchange air in six to eight minutes per vehicle and all windows open six to eight inches Monterey-Salinas Transit: Leaving bus windows open to draw air through the vehicle NYCT: Bus windows and roof hatches opened to draw outside air into the vehicle * Shenzhen Bus: Vehicles operate with windows open to increase ventilation
	Sanitize HVAC elements	Rossiyskie Zheleznye Dorogi: Installed UV lamps in the duct works of trains * Shanghai Keolis: Adjusted streetcar HVAC to use all fresh air and equipped air conditioning units with UV lights * Translink: Piloting photocatalytic oxidation technology on transit vehicles *

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Infrastructure

Topic	Description	Examples
1. Stations, terminals, and other revenue facilities	Clean, disinfect, and ventilate revenue facilities	Athens Transit: Pressure washing bus stops daily Southeastern Regional Transit Authority: Terminals sanitized nightly using electrostatic sprayers The Comet: Cleaning bus stop shelters, benches, and wall panels Transit Windsor: All hard surfaces in transit terminals sanitized daily
2. Cleaning technologies	Install air purifiers at transit facilities	MARTA: Implements project to install 209 air purifiers in air conditioning units found at 18 MARTA facilities
	Use UV lights to disinfect infrastructure	NYCT: Using UV lights on vehicles and working with university and startup to develop portable lights Transport for London: Motion of escalator handrails powers UV light for sanitization*
	Use robots to clean	Hong Kong Mass Transit Railway: Deployed vaporized hydrogen peroxide robot to clean and decontaminate trains and stations*
3. Non-revenue facilities	Clean spaces as they are used	Long Beach Transit: Custodians service administrative buildings three times daily

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Topic	Description	Examples
	Clean and disinfect tools or shared use items	NYCT: Construction tools disinfected daily *
4. Post-exposure	Clean or disinfect spaces after exposure	Transdev (transit contractor): Deep cleaning vehicles, offices, maintenance shops, and facilities after exposure

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Operational Considerations

Planning for Recovery

Topic	Description	Examples
1. Recovery task force	Establish a work group or task force to guide public transit recovery from the COVID-19 pandemic	LACMTA: Recovery Task Force recommendations to improve mobility WMATA: Pandemic Task Force issues recommendations
2. Recovery plan	Establish a decision support system and playbook of recommended operations options for various service scenarios	East Texas Council of Governments: GoBus Pandemic Response Plan Laredo Transit: Pandemic Response Plan Monterey-Salinas Transit: COVID-19 Recovery Plan NACTO: Playbook guidance for managing street design and movement, including transit lanes NYPTA: COVID-19 Recovery & Restoration Plan South Plans Community Action Association: Pandemic Response Plan WMATA: COVID-19 Recovery Plan

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Service Changes to Support Opening, Restoration or Expansion of Transit Service

Topic	Description	Examples
1. Transit services for essential workers	When opening, restoring, or expanding transit service, focus service on key routes for essential workers	Houston Metro: Adding a Texas Medical Center shuttle to move essential employees to the medical center
	Provide essential employees with rides to or from work	Maryland Transit Administration: Cooperative agreement to provide “park-and-ride” service for essential hospital workers
2. Adjusting transit service to support schedules of essential services	Adjust schedules and add trips to address essential workers’ schedules	NYCT: Adjusts service to meet needs of essential workers
3. Supporting transit-reliant communities	When opening, restoring, or expanding transit service, focus on those in the community that need it the most	CATA: Announces Diversity, Equity, and Inclusion Task Force Greensboro Transit Agency: Providing service to city’s free shelter-in-place option for residents experiencing homelessness Jacksonville Transit: Launching new line to improve connectivity to critical resources for areas with known mobility challenges* LACMTA: Recovery Task Force uses an equity framework to prioritize better mobility for those who rely on transit and Published Rapid

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Topic	Description	Examples
		Equity Assessment tool used by LACMTA staff to identify and prioritize equity opportunities post-COVID Montgomery County Transit: Service focuses on Equity Emphasis Areas TriMet: Focus on minority and low-income riders
	Provide alternate service in areas where regular service is not yet restored	Denton County Transportation Authority: Replacing evening fixed-route bus service with on-demand transit Miami-Dade Department of Public Works: Go Nightly campaign for on-demand late-night transit service Monterey-Salinas Transit: Developed routes to replace temporarily suspended volunteer driver routes to veteran medical facilities The Comet: Provides on-demand service for riders on routes that are not currently running* Transfort: On-demand service available for suspended routes

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Topic	Description	Examples
4. Expanding support for passengers with disabilities impacted by service cuts	Expand paratransit service to customers with disabilities who can no longer reach their essential destinations through traditional service	King County: Expands eligibility for paratransit services to those impacted by COVID-19 service cuts
5. Off-peak transit service	Incentivize passengers to travel during off-peak times	Sydney Public Transit Systems: Fares halved for off-peak travel*
	Expand off-peak service	MBTA: Increases service for off-peak hours*
6. Expanding coordinated services	Bring on-demand services back to support enhanced transit service in a coordinated approach	King County: Resumes Via to Transit
7. Discounted fares	Provide discounted fares to encourage ridership	CTA: "More Fun, Less Fare" promotion increases ridership

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Service Adjustments to Manage Crowding

Topic	Description	Examples
1. Staying ahead of demand	Restore more frequent transit service to stay ahead of demand	Colorado Association of Transit Agencies: White paper on Considerations for the Safe Lifting of Transit Capacity Restrictions out of Operational Necessity in the Times of the 2020 COVID-19 Pandemic MARTA: Restoring suspended bus routes and implementing service frequency adjustments to match demand and address capacity limits Miami-Dade: Increases frequency of service on key routes to reduce crowding Pasadena Transit: Increasing buses on its busiest route * WMATA: Outlines phased approach for restoring service Santa Clara Valley Transportation Authority: Light rail return to service plan
2. Changing vehicle type to address service needs	Place larger transit vehicles on agency's most crowded routes	NJT: Use articulated buses to support social distancing * Port Authority: Move largest buses to new routes *

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Topic	Description	Examples
	Preferentially use vehicles that allow for social distancing	Regional Transportation Commission of Southern Nevada: Using high-capacity buses to increase space available for social distancing
	Use vehicles that do not require a commercial driver's license (CDL) to address driver shortage	Albuquerque Transit Department: Using Sun Vans on some routes to address a shortage of drivers with CDLs*
3. Ridesharing	Use ridesharing to supplement fixed route transit service and reduce crowding	Miami-Dade and other agencies: Ridesharing to supplement service* Cities across US: Supplementing service with rideshare*
4. All-door boarding	Use all-door boarding as a strategy to reduce crowding at bus stops	WMATA: Evaluating accelerated installation of SmarTrip targets on rear doors to enable smooth transition to all-door boarding
5. Expanding existing service zones	Use additional service capacity to support essential workers and those with special needs	Charlevoix County Transit: Providing grocery delivery service Pasadena Dial-a-Ride: Delivering food from the food bank to its members*

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Building for the Future

Topic	Description	Examples
1. New bus lanes, traffic signal priority and other measures	Partner with local jurisdictions to accelerate implementation of bus-only lanes and other speed and reliability measures	LACMTA: Announces new bus lanes* MBTA: Partners with four cities to rapidly construct 14 miles of bus lanes
2. Accelerating maintenance, rehabilitation or expansion programs	Take advantage of lower ridership and less service to accelerate or expand maintenance and construction projects	CTA: Refresh & Renew program expanded and accelerated LACMTA: Using reduced traffic to close Wilshire Boulevard to fast-track Purple Line construction* WMATA: Using upcoming low-ridership summer to maximum effect, expands Orange and Silver line shutdown
3. Prioritizing projects based on post-COVID-19 criteria	Prioritize and re-examine major capital projects during recovery	LACMTA: Considering re-prioritizing capital projects Paris: Creating 650 kilometers of post-lockdown cycleways*

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Passenger Communications

Topic	Description	Examples
1. Welcome back campaign	To welcome riders back and restore confidence in the safety of transit service, post plans on agency websites that outline steps the agency will take to ensure the safe restoration of service, often focusing on cleaning and disinfecting, the use of face coverings, how social distance will be maintained, service changes, and the exploration of new measures and technologies	AC Transit: ReNEW plan BART: 15-step plan to welcome back riders Capital District Transportation Authority: Ride Safe Ride Smart campaign CTA: When You're Ready, We're Ready campaign Delaware Authority for Regional Transit: COVID-19 Strategy at a Glance DATTCO: Clean Care Certified initiative Denver RTD: Published report on air flow through its transit buses Greater Portland Council of Governments: Transit Together campaign King County: COVID-19 Response and Recovery Report MBTA: Ride Safer campaign and plan to bring back service

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Topic	Description	Examples
		Metrolinx: Introducing weekend passes to encourage leisure travel using public transit Metropolitan Transit System: Choose Transit campaign NJT: Your Ride to Recovery NY MTA: #TakeTheTrain, #TakeTheBus Campaign to encourage riders to return to transit Ohio Public Transit Association: Ride Easy Ohio campaign Oneida Nation Public Transit: Re-Open Plan Pace Suburban Bus: We're Ready campaign Port Authority: Safe To Go campaign Queensland TRANSLink: COVID-safe public transport plan Ride On: Ride On COVID-19 Safety Guide RTC Southern Nevada: Try Transit campaign


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Topic	Description	Examples
		San Francisco Bay Ferry: The Best Way Back campaign SEPTA: Reopening Guide VTA: VTA's 10-Point Plan to Strengthen Trust in Transit WMATA: Doing Our Part campaign and Community Toolkit UTA: COVID-19 Recovery plan and Recovery Plan Summary
2. Welcome back kits	Provide riders with what they need to safely use the system, including reusable face mask, hand sanitizer and safety guide	CTA: Giving away "Travel Healthy" kits
3. Keeping riders informed in real-time	Provide real-time cleaning information	Ontario Northland: Web application allows passengers to enter a vehicle identifier and see the cleaning history for the vehicle * VRT: Weekly newsletter
4. Collecting information from	Survey customers on their current transportation patterns	Anchorage People Mover: People Mover and AnchorRIDES passenger survey

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Topic	Description	Examples
riders on new travel patterns and needs	and modes, future transportation plans, COVID-19 concerns, and customer experience	Denton County Transportation Authority: Survey of passenger experience during COVID-19 public health emergency Duluth Transit Authority: Better Bus Blueprint study Dutchess County Public Transit: Online survey of residents' past, present, and anticipated transit service needs Metrolinx: Surveyed riders on anticipated trips using transit Miami-Dade: Issues survey as part of 10-year planning goal Minnesota Valley Transit Authority and SouthWest Transit: Joint customer survey MTA: Conducting Customer Satisfaction and COVID-19 Travel Survey Pace Suburban Bus: Inviting feedback on strategic vision plan  Rhode Island Public Transit Authority: Onboard Transit Passenger Survey RideKC: Customer survey on ridership during COVID-19 public health emergency

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Topic	Description	Examples
		Regional Transportation Authority (Chicago): COVID-19 Lapsed Rider Survey Sound Transit: Seeking public input on managing COVID-19-related financial pressures and Sounding Board rider experience panel TriMet: Agency research efforts UTA: COVID-19 General Rider Survey Report Valley Metro: Customer survey on ridership during COVID-19
5. Shifting from print resources	Encourage customers to shift from print media to online sources	NYPTA: Recommends shifting to online media sources
6. Behavioral science tools	Approaches to communicating with passengers based in behavioral science	MTA: Enlisting the help of behavioral psychologists and crowding experts to plan for New York's reopening* Transit agencies: Use behavioral science techniques to attract riders and design passenger communication* and How behavioral science can help with 'normal' after coronavirus*

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Topic	Description	Examples
7. Notifying passengers of potential exposure	Implement a process to notify passengers of potential exposure to workers or other passengers who test positive for COVID-19	Go Metro: Publishing routes, days, and times operators who test positive worked Houston Metro: Publishing routes, days, and times operators who test positive worked* Jacksonville Transportation Authority: Publishing routes, days and times operators who test positive worked and posting information on those routes* Memphis Area Transit Authority: Table of confirmed employee COVID-19 cases
8. In- or on-vehicle messaging	Display safety tips in or on vehicles	Metro Transit: Collaboration with St. Louis Mosaic Project to post multilingual COVID-19 information on buses, trains, and at shelters Tri-Valley Transit: COVID-19 information posted in three languages on buses and at shelters
9. Video campaigns and promotions	Encouraging mask wearing	Multiple agencies: Video encouraging riders to #MaskUpForTransit*
	Demonstration of cleaning process	Denver RTD: Videos of bus and light rail maintenance and cleaning procedures

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Topic	Description	Examples
		NYCT: A spot-check of the New York subway system by the television program Inside Edition revealed no trace of COVID-19 on any of the 32 surfaces swabbed and tested*
10. Vaccination Activities	Provide access to vaccination sites via transit	AC Transit: Running a free shuttle to vaccination site Akron METRO: Providing free rides to vaccination sites Athens on Demand: Providing free rides to vaccination appointments Butler County Regional Transit Authority: Operating shuttle service to vaccine clinic* Capital District Transportation Authority: Running free trolley service to vaccination site Capital Metro: Offering free rides to vaccination appointments Charlottesville Area Transit System and JAUNT: Providing free rides to vaccination center City of Galesburg Transit: Providing free rides to vaccine clinic

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Topic	Description	Examples
		<p>NEW Community Transit: Providing free rides to vaccination appointments</p> <p>Dubuque County Regional Transit Authority: Providing free rides to vaccination appointments*</p> <p>NEW Gold Coast Transit: Providing free door-to-door transportation to vaccination appointments</p> <p>Jacksonville Transportation Authority: Providing vaccination transportation</p> <p>Lebanon Transit: Providing free transportation to COVID-19 vaccination site</p> <p>Logan Public Transit: Providing free transportation to vaccination appointments</p> <p>MUNI: Providing free transportation to COVID-19 vaccination sites</p> <p>Niagara Region Transit: Providing free transportation to COVID-19 vaccination sites</p> <p>NJT: Providing free transportation to COVID-19 vaccination sites*</p>

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Topic	Description	Examples
		<p>North Carolina: Departments of Health and Human Services and Transportation funding rides to vaccination sites</p> <p>NYCT: Helping passengers access vaccination sites</p> <p>Operating Above the Standard Transit: Providing free rides to vaccination sites*</p> <p>Perry County Transit: Providing free rides to vaccination appointments</p> <p>Pueblo Transit: Offering free shuttle service to vaccination sites*</p> <p>Rabbittransit: Partnering with Agency on Aging Offices in south-central Pennsylvania region to provide free transportation to COVID-19 vaccination sites</p> <p>Racine Transit: Providing free rides to vaccination appointments</p> <p>Rhode Island Public Transit Authority: Free transportation for people traveling to and from vaccination appointments</p> <p>Regional Transportation Commission of Southern Nevada: Offering free transit passes to COVID-19 vaccination sites</p>

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Topic	Description	Examples
		San Diego Metropolitan Transit System: Providing free rides to vaccination appointments SamTrans: Providing free rides to COVID-19 vaccination sites SEPTA: Helping people access vaccine clinics using transit Sonoma-Marín Area Rail Transit: Providing free rides to COVID-19 vaccination sites South Central Regional Transit District: Providing free rides to vaccination appointments Spokane Transit: Providing free rides to vaccination appointments The COMET: Launched “Don’t Miss Your Shot” campaign to inform residents of and transport them to major vaccination sites TriMet: Partnering with the Oregon Health Authority to provide community-based organizations with free day passes for residents to use to travel to vaccination appointments Ulster Area Transit: Providing free rides to vaccination appointments

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Topic	Description	Examples
		VIA: Providing free rides to vaccination locations VRT: Free on-demand transit to and from vaccination appointments Westmoreland Transit: Providing free rides to vaccination appointments
	Leverage transit assets to improve vaccination access	Augusta Transit: Hosting vaccination clinic at transit transfer center* Coast Transit Authority: Hosting vaccination clinic at transit hub and providing free rides to the clinic CTA: Partnering with public schools and the health department to bring mobile CTA bus vaccination clinic to high schools* and hosting onsite vaccination clinics for frontline workers Denver Regional Transit District: Using buses as shuttles to move people between parking area and vaccination site Greater Dayton Regional Transit Authority: Using buses as mobile vaccination clinics Green Bay Metro Public Transportation: Using bus as mobile vaccination clinic*

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Topic	Description	Examples
		<p>Kitsap Transit: Partnering with community health organization to use transit center as a vaccination site</p> <p>LACMTA: Transit stations hosting vaccine clinics*</p> <p>Metrolinx: Hosting vaccination clinic at station and partnering with local eateries to offer free food with proof of vaccination</p> <p>Metro Transit: Partnering with Minnesota Departments of Health and Transportation and Metropolitan Council for the COVID-19 Community Mobile Vaccination Bus Project</p> <p>Regional Transit Service: Hosting vaccination clinics at transit center</p> <p>SPARTAN Public Transit: Trip schedulers help the public find the nearest vaccination site and schedule transportation; retrofitted transit facility to become a mass vaccination site</p> <p>Twin Transit: Working with Department of Health and Human Services to manage a hotline for residents to schedule vaccination appointments, coordinate mobile clinics, and identify and address transportation needs</p> <p>Washington State Ferries: Hosting vaccination clinics onboard ferry line</p>

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Topic	Description	Examples
		WMATA: Hosting vaccination clinic at transit station
	Publicize information on vaccination requirements	NEW Metrolinx: FAQs on Metrolinx Staff Vaccination
11. Federal mask requirement	Publicize information about the Federal mask requirement	MARTA: Passengers must wear masks on transit and in transportation hubs and passengers who refuse to wear a mask may be issued a 12-hour suspension from the system RTC Washoe: Public-facing website describes agency's process to comply with the Federal mask requirement US Department of Transportation: Mask Up Toolkit
	Develop policies to carry out the Federal mask requirement	BARTA: Riders who have a medical condition that prevents them from wearing a mask must apply for a mask exemption Coralville Transit System: Riders who have a medical condition that prevents them from wearing a mask must apply for a mask exemption Red Rose Transit Authority: Riders who have a medical condition that prevents them from wearing a mask must apply for a mask exemption Tulsa Transit: Riders who have a medical condition that prevents them from wearing a mask must apply for a mask exemption

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Technology and Innovation

Detecting Crowding

Topic	Description	Examples
1. Real-time tools to track crowding on transit vehicles	Provide real-time vehicle occupancy information to help passengers make informed decisions about riding	Alameda-Contra Costa Transit District: Automated Passenger Counters update crowding information on transit website Auckland Transit: Passengers “tap” fare media when boarding and alighting to convey real-time passenger loads* Community Transit: Online bus seat availability tool allows potential passengers to assess crowding prior to boarding CTA: Bus crowding report for passengers Danske Statsbaner (Danish State Railways): Advanced booking, including information on which services and vehicles are the least crowded* East Japan Railway: Real-time information on vehicle occupancy and the availability of space for “reduced mobility passengers” LIRR: Real-time crowding information available to the public

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Topic	Description	Examples
		MBTA: Real-time crowding information on nine bus routes displayed on bus stop digital signs and in the MTBA transit phone application Port Authority: Room2Ride online tool helps passengers estimate bus crowding York Region Transit: Popular travel times by bus line posted to help passengers estimate bus crowding
2. Monitoring crowding in transit service	Use AI and CCTV to monitor crowding on transit platforms and vehicles	India: AI helps cities monitor and manage crowding*
3. Apps to help riders make appointments for transit service	Provide apps that lets riders make appointments to enter subway stations during rush hours	Beijing Transit: Uses “subway by appointment” to reduce crowding*
4. Vaccination site mapping	Integrate vaccination sites into transit maps	LACMTA: Updated transit app to include vaccination sites on transit map

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Passenger Monitoring

Topic	Description	Examples
1. Monitoring passenger temperatures	Test temperatures prior to or during boarding process	Argentinian Trains: New turnstiles check passenger temperature, check for face masks * Beijing Transit: Uses temperature monitoring in subway * MTA: Recommends the use of thermal cameras to monitor riders' temperatures in subway stations * Rapid Kuala Lumpur: Rider temperatures screened prior to boarding * South Korea: Bus shelters scan passenger temperature *
2. Monitoring transit stations and vehicles for face mask use	Use AI technology and CCTV cameras to monitor face mask use	France: AI technology monitors whether passengers are wearing face masks * NJT: Testing cameras for face mask detection, heat mapping * NYCT: Recommends use of AI to assess mask wearing *

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Passenger Engagement

Topic	Description	Examples
1. Passenger reporting of unclean surfaces	Use transit app to allow passengers to report concerns on the system, including cleanliness issues	DART: Say Something App for reporting surfaces that need to be cleaned

Cleaning, Sanitizing, and PPE

Topic	Description	Examples
1. UV robots	UV-cleaning robots to disinfect trains and stations	Pittsburgh: Airport is the first in the US to use UV-cleaning robots*
2. Chemical-dispensing robots	Robot technology to conduct deep cleaning and decontamination	Hong Kong Mass Transit Railways: Using an automated robot to clean hard to reach areas*
3. Partnering with companies to design PPE	Work with vendors to re-tool or expand their capabilities to provide products and supplies	BYD for Toronto Transit Commission: Manufactures face masks for transit systems*

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Payment Options

Topic	Description	Examples
1. Phone and watch app to support contactless payment	Launch phone and watch app to support contactless fare payment	WMATA: Launches iPhone and Apple Watch app to allow riders to use their phone or watch to pay fare at smart card readers and offering free bike rides to Metro customers who create a mobile transit card
2. Contactless fare payment and mobile ticketing	Accelerate or start the process of introducing contactless fare payment	<div><div>NEW</div><div>DART: Now accepting contactless payment Gary Public Transportation Corporation: Launching mobile ticketing compatible with ticketing options for neighboring transit properties Gwinnett County Transit: Launching Token Transit app for contactless payment Jacksonville Transit: Launching Token Transit app for contactless payment LACMTA: Recommends rapid introduction of contactless, visual ticket purchase and payment option in Metro's new "Transit" app MetroLink: Launched mobile fare option Queensland TRANSLink: Introducing "smart ticketing" with public information campaign, including on-platform representatives</div></div>

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Topic	Description	Examples
		Rhode Island Public Transit Authority: Launched new contactless smart fare system
3. Providing unbanked or underbanked transit riders with access to TouchPass system	Supplement Title VI inclusivity programs with broad, local, and convenient access for passengers to add value using cash to TouchPass accounts	COTA: Working with state government to load fares onto magnetic-strip EBT cards used for food benefits*
4. Virtual enrollment in fare programs	Allow passengers to sign up for reduced fare programs online	<div><div>NEW</div>LACMTA: Low income fare discount applications accepted online</div> <div><div>NEW</div>MBTA: Applications for youth passes accepted online</div> <div>Pasadena Transit: Dial-A-Ride applications accepted online</div> <div>Rhode Island Public Transit Authority: Passengers can apply for renewed reduced fare or no fare bus passes online</div> <div>TriMet: Temporarily opening a virtual application site</div>

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Micromobility

Topic	Description	Examples
1. Expanding microtransit partnerships through technology and contracts	Pilot and expand alternative services following new models, such as MicroTransit and Mobility on Demand	Arlington RAPID: Fleet of five autonomous vehicles available through the local transit app Denton County Transportation Authority: Using the Spare Platform to replace fixed-route service with on-demand transit to manage the number of riders on a vehicle and trace riders LAMCTA: On-demand services adapted to accommodate essential trips to grocery stores, pharmacies, and medical centers Solano Mobility: Paying 80-percent of Lyft fare to and from public transit hubs SunLine Transit Agency: Offering a SunRide microtransit service Trinity Metro: Added additional on-demand rideshare programs and expanded service area Winnipeg Transit: Launching Winnipeg Transit On-Request

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